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AUTHOR Porter, Julia Damron; And Others
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ABSTRACT

Addressing the shortage of health care providers in rural areas, this study examined the relationship between selected sociodemographic and background factors of students to intentions to practice as physician assistants in rural underserved areas. Respondents in the study were 82 students in the University of Kentucky physician assistant program between 1986 and 1990. A 34-item test yielded background data and information on attitudes and values associated with potential practice in rural and Appalachian areas. Key variables were rural background and marital status. Major findings were: (1) 44% of students preferred a rural area or small town as a practice site (among those who were single, 40.35% preferred the more rural areas, compared to 62.5% of married students); (2) of those students from rural areas, 78.6% considered rural areas as ideal practice sites while only 10% of students from metropolitan cities agreed; (3) of the students from rural areas (under 2,500 in population), 92.9% were attracted to medically underserved areas; (4) by background category, 89.5% of students from small towns and rural areas versus 44.4% from urban areas had considered practice in Appalachian Kentucky. A strong positive relationship exists between rural background and intention to practice in a rural area. Therefore, attention to selection of students with rural background may improve health care manpower toward service in rural underserved areas. (KS)

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STUDENT CHARACTERISTICS AND INTEREST IN RURAL PRACTICE

Julia Damron Porter, Ed.D.
Research Associate

Gerry A. Gairola, Ph.D.
Associate Professor

Karen O. Skaff, M.S.
Associate Professor

Department of Health Services
College of Allied Health
University of Kentucky
Lexington, Kentucky

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STUDENT CHARACTERISTICS AND INTEREST IN RURAL PRACTICE

INTRODUCTION

There is increasing concern about addressing health manpower shortages which now exist in many rural areas of the United States. The rural health crisis is related to a number of demographic factors, such as: (1) an increasing percentage of rural population is elderly -- 25% of the rural population is over age 65, (2) the rural poverty rate of 18.3% is far ahead of the urban poverty rate, and (3) since 1980, the rural unemployment rate has been higher than the urban rate (American Academy of Physician Assistants Council on Professional Practice, 1990).

Since the 1960's there have been major federal attempts to alleviate problems of health manpower shortages and maldistributions in America's rural areas. Physician assistants and other mid-level health care personnel have been key factors in these strategies. Physician assistants (PAs) are mid-level practitioners who assist physicians in delivering primary care and, increasingly, in other specialties. They take patient histories, perform physical examinations, and generally extend the services of physicians. In many states physician assistants have prescriptive privileges as well. For over 20 years now, substantial numbers of physician assistants have worked in rural health care. According to several surveys up to 20% have been working in rural areas (Willis, 1990). The potential is present for more physician assistants to serve in even greater numbers in expanded capacities as physician extenders in rural areas.

In response to such concerns, the University of Kentucky Physician Assistant Studies Program developed the Training for Appalachian Practice (TAP) Project specifically to address health manpower needs of Appalachian Kentucky, which consists of 49 primarily rural counties in the eastern part of the state. The goal of the project is to increase physician assistant

deployment in the health manpower shortage areas of Appalachian Kentucky. Overall the project seeks to effectively prepare well-qualified primary care, mid-level practitioners who will seek, secure, and retain employment in medically underserved areas. The Physician Assistant Studies Program works with state Area Health Education Centers (AHECs) in designing and implementing methods aimed at achieving these goals.

The methodology for the TAP project focuses on two separate but interrelated areas: (1) the design and implementation of an Appalachian Studies curriculum for students and (2) increasing employment opportunities within health manpower shortage areas in Appalachian Kentucky counties. The Appalachian studies component includes: (a) didactic seminars on Appalachian history, culture, economy and health care, (b) clinical training in Appalachian Kentucky, and (c) pretesting and posttesting in regard to student learning experiences, intentions and motivations to practice in Appalachia. The component which aims at increasing employment opportunities includes: (a) surveying employing and non-employing physicians in the target area to examine attitudes and intentions regarding physician assistant utilization, and (b) the development of intervention strategies based on the physician surveys and student tests toward improving opportunities for physician assistant employment in Appalachian Kentucky.

A number of contingencies and phenomena are involved in deployment of physician assistants to rural health manpower shortage areas. Despite the long-time involvement in rural health care, projections from a recent national survey of practicing physician assistants suggest that the number of physician assistants entering practice in rural communities will drop. This survey, based on the American Academy of Physician Assistants (AAPA) membership, found among practicing physician assistants in rural areas a dramatic decrease -- from 20% in 1989 to

about 13% in 1990. It is suggested that this is partially due to more women entering the profession, who tend to practice in urban areas (Willis, 1990). Rural practitioners tending to be predominantly male was also found in an earlier survey of graduates from the University of Kentucky PA Program (Gairola, 1982). This analysis also found a difference in rural practice according to marital status, with substantially more married than single students locating in rural areas (Gairola, 1982). This finding is consistent with other literature which suggests that needs of the spouse and family of the health professional are important determinants of practice location. Employment for the spouse, quality of local infrastructure and quality of life factors become critical concerns in decisions for employment location.

In the literature on physician choice of practice location, there is also evidence that a health professional raised in a rural setting is more likely to select a rural practice site than an urban site. In the earlier UK study rural background seemed related to rurality of practice site (Gairola, 1982). In addition, rural background of the spouse has been found to be a strong predictor for the choice of a rural practice setting.

This paper examines the relationship between selected sociodemographic and background factors to intentions to practice in rural underserved areas. Students in the study are from a general population since there are presently no selective admission policies in the Physician Assistant Studies Program favoring rural and/or non-traditional students.

METHODS

Since 1986 a pretest has been administered to all entering UK physician assistant students in the first semester of the junior year. (Students enter the program as juniors). The 34-item pretest is constructed to yield background data and information on attitudes and values associated

with potential practice in rural and Appalachian areas. Thus far, data has been collected for four entering classes, a total of 82 students, in the PA program. Sixteen students were from the class of 1988, 20 from the class of 1989, 22 from the class of 1990, and 24 from the class of 1991. Data for this study is based on responses to the pretest.

FINDINGS

Background Characteristics

Age and sex were examined primarily in terms of frequencies, with the focus on rural background and marital status. Overall around 44% of students have been of traditional age, here defined as 21 to 24 years. About 32% were 25-30 years of age, and 24% were 31 years of age and over. (See Table 1.) There is a trend for students to enter the program at earlier ages: in 1986, all entering students (n=16) were age 25 or older, with 6 (37.5%) being 31 years of age or older. By contrast, in 1988 of the 22 entering students, 17 or 77.3% were in the youngest category -- 21 to 24 years of age.

TABLE 1
STUDENTS BY AGE ON ENTRY

AGE	FREQUENCY	PERCENT
21 - 24	36	43.9
25 - 30	26	31.7
31 OR MORE	20	24.4

In regard to the variable of sex, there has been an overall trend over the four years of the study toward more females in each entering class. The first class was evenly divided among males and females, but the following year females constituted 66.7% of the class and 77.3% the following year. In the most recent or 1991 entering class, females made up 62.5% of the class.

Upon entering the PA program, almost 70% of students were single, with about 20%

married and around 10% divorced or separated. (See Table 2.) The largest percentage of non-single students is in the earliest class of the study -- 1988 -- which was also characterized by older ages at entry. In succeeding years, the majority of students were single: 15/20 in the class of 1989, 17/22 in the class of 1990, and 17/24 in the class of 1991.

As to rural background, earlier classes had more students from rural areas and small towns of under 10,000 population. Overall, around 41% of those entering were from such areas. (See Table 3.) The class of 1988 was made up of around 44% of students from rural areas, and the class of 1989 had more with about 50%. On the other hand, the 1990 class had only 28.6% from rural areas and small towns, while over 70% were from more urban areas. This trend continued with the class of 1991, with nearly 60% coming from the more urban areas.

TABLE 2
CLASS BY MARITAL STATUS

CLASS	MARITAL STATUS				
	SINGLE	MARRIED	DIVORCED	SEPARATED	TOTAL
1988	8	4	3	1	16
	50.00	25.00	18.75	6.25	
	14.04	25.00	37.50	100.00	
1989	15	2	3	0	20
	75.00	10.00	15.00	0.00	
	26.32	12.50	37.50	0.00	
1990	17	5	0	0	22
	77.27	22.73	0.00	0.00	
	29.82	31.25	0.00	0.00	
1991	17	5	2	0	24
	70.83	20.83	8.33	0.00	
	29.82	31.25	25.00	0.00	
TOTAL	57	16	8	1	82

TABLE 3
CLASS BY RURAL BACKGROUND

CLASS	RURAL BACKGROUND				
	RURAL < 2,500	TOWN TO 9,999	CITY TO 49,999	METRO > 50,000	TOTAL
1988	3	4	5	4	16
	18.75	25.00	31.25	25.00	
	21.43	21.05	23.81	14.81	
1989	3	7	4	6	20
	15.00	35.00	20.00	30.00	
	21.43	36.84	19.05	22.22	
1990	3	3	6	9	21
	14.29	14.29	28.57	42.86	
	21.43	15.79	28.57	33.33	
1991	5	5	6	8	24
	20.83	20.83	25.00	33.33	
	35.71	26.32	28.57	29.63	
TOTAL	14	19	21	27	81

NO RESPONSE = 1

Practice Intentions

Three questions were asked in the instrument to assess students' intentions regarding practice sites, especially in rural areas. These items were: (1) "Your ideal practice site after graduation is...(by) geographic location a rural area, a small town, a small city, or a metropolitan

area?" (2) "Your ideal practice site after graduation is a medically underserved, needy area?", and (3) "Have you ever considered practicing in Appalachian Kentucky after you graduate?"

The data show a relatively even division of student intention on rurality of ideal practice site. (See Table 4.) To 44% of students entering the program, the ideal practice site was either a rural area of less than 2500 or a town of less than 10,000. There is fluctuation with successive classes, but a trend is evident toward more metropolitan areas for intended practice sites. With the class of 1988, over 56% regarded the rural and small town sites as ideal; however, in the class of 1989, the corresponding figure preferring more rural sites was down to 35%. Fifty percent of the 1990 class listed rural areas as ideal sites, while 38% did so for the class of 1991.

Responses to the question of whether the ideal practice site was a medically underserved area were positive for over 58% of the physician assistant students, with an additional 6% undecided. (See Table 5.) The percentage of positive responses was highest for the earliest class (1988) with 75%, and lowest for the following class -- 42%; however, 21% were undecided for the 1989 class. For the class of 1990 around 64% considered an underserved area an ideal site. About 58% considered an underserved area ideal in the 1991 class. (These figures are not necessarily tied to a rural setting and can also include urban underserved areas.)

TABLE 4
CLASS BY IDEAL PRACTICE SITE

CLASS	IDEAL PRACTICE SITE				
	RURAL <2,500	TOWN TO 9,999	CITY TO 49,999	METRO >50,000	TOTAL
1988	2 12.50 25.00	7 43.75 25.00	3 18.75 10.71	4 25.00 22.22	16
1989	1 5.00 12.50	6 30.00 21.43	8 40.00 28.57	5 25.00 27.78	20
1990	3 13.64 37.50	8 36.36 28.57	7 31.82 25.00	4 18.18 22.22	22
1991	2 8.33 25.00	7 29.17 25.00	10 41.67 35.71	5 20.83 27.78	24
TOTAL	8	28	28	18	82

TABLE 5
CLASS BY MEDICALLY UNDERSERVED AREA

CLASS	MEDICALLY UNDERSERVED AREA			
	NO	YES	DON'T KNOW	TOTAL
1988	4 25.00 14.29	12 75.00 25.00	0 0.00 0.00	16
1989	7 36.84 25.00	8 42.11 16.67	4 21.05 80.00	19
1990	8 36.36 28.57	14 63.64 29.17	0 0.00 0.00	22
1991	9 37.50 32.14	14 58.33 29.17	1 4.17 20.00	24
TOTAL	28	48	5	81

NO RESPONSE = 1

In response to the question of considering practice in Appalachian Kentucky after graduation, 51 of the 82 students, or 62.2%, answered positively, as is indicated in Table 6. Within individual classes, the positive response varied from 54.6% to 68.8%, with the highest percentage being in the earliest (1988) class. At the time of entry into the PA program, seven students (8.5%) had definite plans to practice in Appalachian Kentucky.

The Relationship Between Background Characteristics and Practice Intentions

The responses concerning practice intentions were then cross-tabulated against marital status and rural background. Overall 44% of students preferred a rural area or a small town of under 10,000 population as a practice site. However, among those who were single, 40.35% preferred the more rural areas, compared to 62.5% of married students, as is seen in Table 7. Even though a greater percentage of students in each marital status category preferred urban areas, the percent preferring the more rural areas for both married and single categories was substantial.

TABLE 6
CLASS BY CONSIDERED APPALACHIAN PRACTICE

CLASS	CONSIDERED APPALACHIAN PRACTICE		
	NO	YES	TOTAL
1988	5 31.25 16.13	11 68.75 21.57	16
1989	8 40.00 25.81	12 60.00 23.53	20
1990	10 45.45 32.26	12 54.55 23.53	22
1991	8 33.33 25.81	16 66.67 31.37	24
TOTAL	31	51	82

TABLE 7
MARITAL STATUS BY IDEAL PRACTICE SITE

MARITAL STATUS	IDEAL PRACTICE SITES				
	RURAL < 2,500	TOWN TO 9,999	CITY TO 49,999	METRO > 50,000	TOTAL
SINGLE	6 10.53 75.00	17 29.82 60.71	21 36.84 75.00	13 22.81 72.22	57
MARRIED	1 6.25 12.50	9 56.25 32.14	4 25.00 14.29	2 12.50 11.11	16
DIVORCED	1 12.50 12.50	2 25.00 7.14	2 25.00 7.14	3 37.50 16.67	8
SEPARATED	0 0.00 0.00	0 0.00 0.00	1 100.00 3.57	0 0.00 0.00	1
TOTAL	8	28	28	18	82

Ideal practice site as related to rural background was also examined. Forty-four percent

of entering students considered rural areas and small towns of under 10,000 population to be ideal practice sites. Of those students from rural areas 78.6% considered rural areas and small towns of less than 10,000 population as ideal practice sites. (See Table 8.) Similarly, 57.9% of students from towns of less than 10,000 population considered rural areas and small towns of 10,000 population as ideal practice sites. Of students from cities of 10,000 to 50,000 population or metropolitan cities (greater than 50,000 population) around ten percent or less considered small towns or rural areas to be ideal. However, about 29% of students from areas of population of less than 50,000 were attracted to towns of under 10,000. Overall, rural background appeared to be correlated with degree of rurality in ideal practice site.

The second question, regarding ideal practice site as it related to being medically underserved, was also examined according to marital status. The majority of students within each marital status category responded that their ideal practice sites were in medically underserved areas, as is seen in Table 9. This included approximately 52% of single students, 81% of married students and 75% of divorced students.

TABLE 8
RURAL BACKGROUND BY
IDEAL PRACTICE SITE

RURAL BACKGROUND	IDEAL PRACTICE SITE				
	RURAL < 2,500	TOWN TO 9,999	CITY TO 49,999	METRO >50,000	TOTAL
RURAL < 2,500	2 14.29 25.00	9 64.29 33.33	2 14.29 7.14	1 7.14 5.56	14
TOWN TO 9,999	2 10.53 25.00	9 47.37 33.33	7 36.84 25.00	1 5.26 5.56	19
CITY TO 49,999	2 9.52 25.00	6 28.57 22.22	10 47.62 35.71	3 14.29 16.67	21
METRO > 50,000	2 7.41 25.00	3 11.11 11.11	9 33.33 32.14	13 48.15 72.22	27
TOTAL	8	27	28	18	81

NO RESPONSE = 1

TABLE 9
MARITAL STATUS BY
MEDICALLY UNDERSERVED AREA

MARITAL STATUS	MEDICALLY UNDERSERVED AREA			
	NO	YES	DON'T KNOW	TOTAL
SINGLE	23 41.07 82.14	29 51.79 80.42	4 7.14 80.00	56
MARRIED	3 18.75 10.71	13 81.25 27.08	0 0.00 0.00	16
DIVORCED	1 12.50 3.57	6 75.00 12.50	1 12.50 20.00	8
SEPARATED	1 100.00 3.57	0 0.00 0.00	0 0.00 0.00	1
TOTAL	28	48	5	81

NO RESPONSE = 1

When consideration of the site being medically underserved was examined by rural background, a relationship was found to exist: 92.9% of students from rural areas of under 2500 population were attracted to medically underserved areas, and 72.2% of students with small town backgrounds (2500 - 10,000 population). (See Table 10.) Of students with more urban backgrounds, 57% of those from cities of up to 50,000 and 37% from the most metropolitan areas considered ideal practice sites to be medically underserved.

Finally, the third question of whether practice in Appalachian Kentucky had been considered was cross-tabulated by marital status. The highest percentage in each marital status category responded that they had considered this site, as is seen in Table 11. Sixty-three percent of single students, 56% of married students and 62.5% of divorced students said they had considered practice in Appalachian Kentucky.

TABLE 10
RURAL BACKGROUND
MEDICALLY UNDERSERVED AREA

RURAL BACKGROUND	MEDICALLY UNDERSERVED AREA			
	NO	YES	DON'T KNOW	TOTAL
RURAL < 2,500	1 7.14 3.70	13 92.86 27.08	0 0.00 0.00	14
TOWN TO 9,999	4 22.22 14.81	13 72.22 27.08	1 5.56 20.00	18
CITY TO 49,999	7 33.33 25.93	12 57.14 25.00	2 9.52 40.00	21
METRO > 50,000	15 55.56 55.56	10 37.04 20.83	2 7.41 40.00	27
TOTAL	27	48	5	80

NO RESPONSE = 2

TABLE 11
MARITAL STATUS BY CONSIDERED
APPALACHIAN PRACTICE

MARITAL STATUS	CONSIDERED APPALACHIAN PRACTICE		
	NO	YES	TOTAL
SINGLE	21 36.84 67.74	36 63.16 70.59	57
MARRIED	7 43.75 22.58	9 56.25 17.65	16
DIVORCED	3 37.50 9.68	5 62.50 9.80	8
SEPARATED	0 0.00 0.00	1 100.00 1.96	1
TOTAL	31	51	82

The question of consideration of Appalachian Kentucky practice was then examined against rural background of the students. (See Table 12.) Overall 62.2% of students responded that they had considered the area as a site. Across background categories, percentages ranged

from a low of 44.4% in the most urban background category to 89.5% for students from small towns of less than 10,000 population.

TABLE 12
RURAL BACKGROUND BY CONSIDERED APPALACHIAN PRACTICE

RURAL BACKGROUND	CONSIDERED APPALACHIAN PRACTICE		
	NO	YES	TOTAL
RURAL < 2,500	5 35.71 16.67	9 64.29 17.65	14
TOWN TO 9,999	2 10.53 6.67	17 89.47 33.33	19
CITY TO 49,999	8 38.10 26.67	13 61.90 25.49	21
METRO > 50,000	15 55.56 50.00	12 44.44 23.53	27
TOTAL	30	51	81

NO RESPONSE = 1

There was a positive response for Appalachian Kentucky consideration among 61.9% of students from cities of less than 50,000 population, and a 64.3% positive response from students in the most rural categories (under 2500 population).

CONCLUSIONS

Nearly half of entering students in the Physician Assistant Studies Program at the University of Kentucky have considered rural areas and small towns of less than 10,000 population to be ideal practice sites. Nearly 60% thought that ideal practice sites would be medically underserved. Overall, over 60% of students had considered Appalachian Kentucky as a practice site upon graduation. These figures have stayed relatively constant throughout the four years of the study, but there is a slight trend for students to be more interested in urban practice. This agrees with the changing patterns in practice reported in national survey data on physician

assistant practice (Willis, 1990). There appears to be among students an increasing awareness of and response to growing opportunities for employment in the more urban areas and in specialties other than primary care. This interest could reflect the evolving job market for PAs in urban areas (Caton, 1990).

In the next phase of analysis in this study, that of posttest responses from students who have completed physician assistant training, including Appalachian seminars and clinical rotations at Appalachian sites, if similar intentions to practice in rural, underserved areas are seen, this would suggest that attention to selection of students with such characteristics as rural background may influence health care manpower toward service in rural underserved areas. At this stage of analysis in the study, it appears that such attention to student selection could well affect employment site following graduation. A strong positive relationship exists between rural background and intention to practice in a rural area. However, further analysis of this data will be conducted to examine the complexity of variables which appear to affect employment decisions as graduates enter the profession of the physician assistant.

REFERENCES

American Academy of Physician Assistants Council on Professional Practice. (1990). Physician Assistants and Rural Health Care. Journal of the American Academy of Physician Assistants, 3(6), 414-422.

Caton, Lynn. (1990). Rural Health Care: A Look to the Future. Journal of the American Academy of Physician Assistants, 3(6), 439-441.

Gairola, G.A. (1982). Physician Assistant Graduates: Factors Related to Rural-Urban Practice Location. Journal of Community Health, 8(1), 23-32.

Willis, J.B. (1990). Is the PA Supply in Rural America Dwindling? Journal of the American Academy of Physician Assistants, 3(6), 433-435.